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2 8 APR 1965

MEMORANDUM FOR: Director, (8) National Reconnaissance Office

SUBJECT : Reconnaissance Using Balloons

- 1. Your letter to the Director, Program B, suggesting re-evaluation of the AKINDLE proposal has been referred to me.
- 2. As you will recall, CIA proposed the use of balloons for ELINT reconnaissance approximately one year ago. The 303 Group disapproved use of the AKINDLE concept. That proposal was forwarded to the 303 Group via your office. Our proposals at that time stemmed from priority needs for information on research phases in the firing of two new Soviet missiles. At this time, there appear to be no factors which would materially change the Group views on this matter.

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4. For your professional interest, it now appears feasible to mount balloon operations for flights at the 110,000 foot level with SIGINT payloads of 25 pounds. A capability now exists for air launch and recovering of

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the vehicle. Extremely low temperatures at the 110,000 foot altitude cause undesirable power supply and thermal insulation to equipment weight ratios because of protection required for batteries in the system. In contrast, ambient temperatures averaging 0° C. at 150,000 foot permit an improved weight ratio with a 25 pound SIGINT payload possible after some development and a 50 pound SIGINT payload after further research effort.

If you feel that the NRO Program should include an AKINDLE type stand-by capability and more experience in the high altitude balloon reconnaissance art, CIA is prepared to consider a vehicle developmental program for such operations over the ZI. It is known that very useful climatology data can be obtained as a by-product of such operations, which is of interest to the Air Weather Service.

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- Funding is estimated to be for the development of an air launch system and vehicle that first could place a 5# payload to 150,000 foot for three days and, with a parallel development effort, place a 25# payload capability to the same altitude also for a three day period. Available estimates indicate such a program undertaken by mid-May can result in ten 5# and three 25# payload overflights of the ZI from the middle of July through the middle of September. This would provide meteorological and operational data as well as firming. the vehicle design data. The unit cost per 25# payload vehicle and air launch mechanism after development, considering that the air launch canisters could conservatively be reused and refurbished six times, is exclusive of an electronics package. 50X1 estimated to be
- We are exploring the use of balloons as a vehicle for use in photographic reconnaissance in a low key effort.

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ALBERT D. WHEELON. op Deputy Director for Science and Technology

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